Form Approved. O.M.B. Nos. 2070-0012 and 2070-0038

U.S. ENVIRONMENTAL PROTECTION AGENCY			AGENCY USE ONLY	
EPA	PREMANUFACTURE NOTICE FOR NEW CHEMICAL SUBSTANCES		Date of receipt:	08/24/2017
When completed, send this form to:	If sending by Courier: Office of Pollution Prevention and Toxics Document Control Office (7407M) US EPA, 1201 Constitution Ave NW WASHINGTON, D.C. 20460 Contact Numbers: 202-564-8930/8940	If sending by US Mail: Office of Pollution Prevention and Toxics Document Control Office (7407M) US EPA, 1200 Pennsylvania Ave NW WASHINGTON, D.C. 20460	Submission Report Number	

Total Number of Pages	User Fee Payment ID Number	TS Number
26	6147832	JM269H

GENERAL INSTRUCTIONS

- You must provide all information requested in this form to the extent that it is known to or reasonably ascertainable by you. Make reasonable estimates if you do not have actual data.
- Before you complete this form, you should read the "Instructions Manual for Premanufacture Notification" (the Instructions Manual is available from the Toxic Substances Control Act (TSCA) Information Service by calling 202-554-1404, or faxing 202-554-5603).
- If a user fee has been remitted for this notice (40 CFR 700.45), indicate in the boxes above the TS-user fee identification number you have generated. Remember, your user fee ID number must also appear on your corresponding fee remittance. For mailing address information see the Help instructions in the e-PMN tool.

Part I – GENERAL INFORMATION

You must provide the currently correct Chemical Abstracts (CA) Name of the new chemical substance, even if you claim the identity as confidential. You may authorize another person to submit chemical identity information for you, but your submission will not be complete and the review will not begin until EPA receives this information. A letter in support of your submission should reference your TS user fee identification number. For all Section 5 Notice submissions (paper or electronic) you must submit an original notice including all test data; if you claimed any information as confidential, an original sanitized copy must also be submitted.

Part II – HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE

If there are several manufacture, processing, or use operations to be described in Part II, sections A and B of this notice, reproduce the sections as needed.

Part III – LIST OF ATTACHMENTS

For paper submissions, attach additional sheets if there is not enough space to answer a question fully. Label each continuation sheet with the corresponding section heading. In Part III, list these attachments, any test data or other data and any optional information included in the notice.

OPTIONAL INFORMATION

You may include any information that you want EPA to consider in evaluating the new substance. On page 11 of this form, space has been provided for you to describe pollution prevention and recycling information you may have regarding the new substance. "Binding" boxes are included throughout this form for you to indicate your willingness to be bound to certain statements you make in this section, such as use, production volume, protective equipment . . . The intention is to reduce delays that routinely accompany the development of consent orders or Significant New Use Rules. Checking a "binding" box in a PMN does not by itself prohibit the submitter from later deviating from the information (except chemical identity) reported in the form; however, in the case of exemption applications (such as TMEA, LVE, LOREX) certain information provided in such notifications is binding on the submitter when the Agency approves the exemption application, especially if the production volume "binding" box is chosen in a LVE.

CONFIDENTIALITY CLAIMS

You may claim any information in this notice as confidential. To assert a claim on the form, mark (X) the confidential box next to the information that you claim as confidential. To assert a claim in an attachment, circle or bracket the information you claim as confidential. If you claim information in the notices as confidential, you must also provide a sanitized version of the notice, (including attachments). For additional instructions on claiming information as confidential, read the Instructions Manual.

TEST DATA AND OTHER DATA

You are required to submit all test data in your possession or control and to provide a description of all other data known to or reasonably ascertainable by you, if these data are related to the health and environmental effects on the manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance. Standard literature citations may be submitted for data in the open scientific literature. Complete test data (written in English), not summaries of data, must be submitted if they do not appear in the open literature. You should clearly identify whether test data is on the substance or on an analog. Also, the chemical composition of the tested material should be characterized. Following are examples of test data and other data. Data should be submitted according to the requirements of §720.50 of the Premanufacture Notification Rule (40 CFR Part 720).

Test Data (Check Below any included in this notice)

[X]	Environmental fate data	[X]	Other Data
[X]	Health effects data	[ ]	Risk Assessments
[X]	Environmental effects data	[X]	Structure/activity relationships
[X]	Physical/Chemical Properties (A physical and chemical properties worksheet is located on the last page of this form.)		
[ ]	Test data not in the possession or control of the submitter		

TYPE OF NOTICE (Check Only One)

- [X] **PMN** (Premanufacture Notice)
- [ ] **SNUN** (Significant New Use Notice)
- [ ] **TMEA** (Test Marketing Exemption Application)
- [ ] **LVE** (Low Volume Exemption) @ 40 CFR 723.50(c)(1)
- [ ] **LOREX** (Low Release/Low Exposure Exemption) @ 40 CFR 723.50(c)(2)
- [ ] **LVE** Modification
- [ ] **LOREX** Modification
- [ ] **Mock Submission**
- [ ] Mark (X) if pending Letter of Support

N — IS THIS A CONSOLIDATED PMN (Y/N)?

1 — # of chemicals or polymers (Prenotice Communication # required, enter # on p. 3).

[X] Mark (X) if any information in this notice is claimed as confidential.

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The public reporting and recordkeeping burden for this collection of information is estimated to average 93 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA Form 7710-25 to this address.

CERTIFICATION -- A printed copy of this signature page, with original signature, must be submitted with CD or paper submission.

I hereby certify to the best of my knowledge and belief that all information entered on this form is complete and accurate. I further certify that, pursuant to 15 U.S.C. § 2613(c), for all claims for protection for any confidential information made with this submission, all information submitted to substantiate such claims is true and correct, and that it is true and correct that the person submitting the claim has:

(i) taken reasonable measures to protect the confidentiality of the information;

(ii) determined that the information is not required to be disclosed or otherwise made available to the public under any other Federal law

(iii) a reasonable basis to conclude that disclosure of the information is likely to cause substantial harm to the competitive position of the person; and

(iv) a reasonable basis to believe that the information is not readily discoverable through reverse engineering.

Any knowing and willful misrepresentation is subject to criminal penalty pursuant to 18 U.S.C. § 1001.

Additional Certification Statements:

If you are submitting a PMN, Intermediate PMN, Consolidated PMN, or SNUN, check the following **user fee** certification statement that applies:

- [X] The Company named in Part I, Section A has remitted the fee of $2500 specified in 40 CFR 700.45(b), or
- [ ] The Company named in Part I, Section A has remitted the fee of $1000 for an Intermediate PMN (defined @ 40 CFR 700.43) in accordance with 40 CFR 700.45(b), or
- [ ] The Company named in Part I Section A is a small business concern under 40 CFR 700.43 and has remitted a fee of $100 in accordance with 40 CFR 700.45(b).

If you are submitting a **Low Volume Exemption (LVE)** application in accordance with 40 CFR 723.50(c)(1) or a **Low Release and Low Exposure Exemption (LoRex)** application in accordance with 40 CFR 723.50(c)(2), check the following certification statements:

- [ ] The manufacturer submitting this notice intends to manufacture or import the new chemical substance for commercial purposes, other than in small quantities solely for research and development, under the terms of 40 CFR 723.50.
- [ ] The manufacturer is familiar with the terms of this section and will comply with those terms; and
- [ ] The new chemical substance for which the notice is submitted meets all applicable exemption conditions.
- [ ] If this application is for an LVE in accordance with 40 CFR 723.50(c)(1), the manufacturer intends to commence manufacture of the exempted substance for commercial purposes within 1 year of the date of the expiration of the 30 day review period.

				Confidential
Signature and title of Authorized Official (Original Signature Required)	*ES/Richard Henrich*	Date	08/24/2017	☐

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Part I -- GENERAL INFORMATION

Section A – SUBMITTER IDENTIFICATION

Mark (X) the "Confidential" box next to any subsection you claim as confidential

1a.	Person Submitting Notice (in U.S.)					Confidential
Name of Authorized Official	(first) Richard		(last) Henrich			
Position	Not Applicable					
Company	CHEMTURA CORPORATION					☐
Mailing Address (number & street)	PO BOX 2200					
City	WEST LAFAYETTE	State	IN	Postal Code	47996-2200	
email	richard.henrich@chemtura.com					

b.	Agent (if Applicable)					Confidential
Name of Authorized Official	(first)		(last)			
Position						
Company						☐
Mailing Address (number & street)						
City		State		Postal Code		
e-mail		Telephone (include area code)				

c.	Joint Submitter (if applicable)					Confidential
If you are submitting this notice as part of a joint submission, mark (X)					☐	
Name of Authorized Official	(first)		(last)			
Position						
Company						☐
Mailing Address (number & street)						
City		State		Postal Code		
e-mail		Telephone (include area code)				

2.	Technical Contact (in U.S.)					Confidential
Name of Authorized Official	(first) Richard		(last) Henrich			
Position	Manager, Global Regulatory Compliance					
Company	LANXESS Solutions US Inc.					☐
Mailing Address (number & street)	3000 Kent Ave. Suite D1-113					
City	West Lafayette	State	IN	Postal Code	47906	
e-mail	richard.henrich@chemtura.com	Telephone (include area code)			7652373394	

			Mark (X) if none	Confidential
3.	If you have had a prenotice communication (PC) concerning this notice and EPA assigned a PC Number to the notice, enter the number.		X	☐
4.	If you previously submitted an exemption application for the chemical substance covered by this notice, enter the exemption number assigned by EPA. If you previously submitted a PMN for this substance enter the PMN number assigned by EPA (i.e. withdrawn or incomplete).		X	☐
5.	If you have submitted a notice of Bona fide intent to manufacture or import for the chemical substance covered by this notice, enter the notice number assigned by EPA.		X	☐

6.	Type of Notice – Mark (X)						
1.	Manufacture Only ☐ Binding Option ☐	2.	Import Only X Binding Option ☐	3.	Both ☐		

Part I – GENERAL INFORMATION -- Continued

Section B – CHEMICAL IDENTITY INFORMATION: You must provide a currently correct Chemical Abstracts (CA) name of the substance based on current CA index nomenclature rules and conventions.

Mark (X) the "Confidential" box next to any item you claim as confidential

Complete either item 1 (Class 1 or 2 substances) or 2 (Polymers) as appropriate. Complete all other items.

If another person will submit chemical identity information for you (for either Item 1 or 2), mark (X) the box at the right. Identify the name, company, and address of that person in a continuation sheet. ☐

1. Class 1 or 2 chemical substances (for definitions of class 1 and class 2 substances, see the Instructions Manual)

	Class 1	Class 2	CBI
a. Class of substance - Mark (X)	☐	☒	☐

b. Chemical name (Currently correct Chemical Abstracts (CA) Name that is consistent with TSCA Inventory listings for similar substances. For Class 1 substances a CA Index Name must be provided. For Class 2 substances either a CA Index Name or CA Preferred Name must be provided, which ever is appropriate based on current CA index nomenclature rules and conventions). ☐

Amides, tallow, N,N-bis(2-hydroxypropyl)

CAS Registry Number (if a number already exists for the substance): 1454803-04-3

c. Please identify which method you used to develop or obtain the specified chemical identity information reported in this notice: (check one).

Method 1 (CAS Inventory Expert Service - a copy of the Identification report obtained from the CAS Inventory Expert Services must be submitted as an attachment to this notice) ☒

IES Order Number: 362002

Method 2 (Other Source) ☐

Enter Attachment filename for Part I, Section B, 1. c.: Original Document: 2 MLA-3202 CAS Number.pdf ☐

d. Molecular formula: C20H39NO3 to C26H51NO3 ☐

e. For a class 1 substance, provide a complete and correct chemical structure diagram. For a class 2 substance, provide a correct representative or partial chemical structure diagram, as complete as can be known, if one can be reasonably ascertained. ☐

See Attachment (Original Document: 1 MLA-3202 REACh Structure.pdf
)

Enter Attachment filename for Part I, Section B, 1. e. ☐

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For a class 2 substance - (1) List the immediate precursor substances with their respective CAS Registry Numbers. (2) Describe the nature of the reaction or process. (3) Indicate the range of composition and the typical composition (where appropriate).	Confidential

e. (1) List the immediate precursor substance names with their respective CAS Registry Numbers. [X]

XXX

Enter Attachment filename for Part I, Section B, 1. e. (1)		[ ]

e. (2) Describe the nature of the reaction or process. [X]

XXX

Enter Attachment filename for Part I, Section B, 1. e. (2)		[ ]

e. (3) Indicate the range of composition and the typical composition (where appropriate). [X]

XXX

Enter Attachment filename for Part I, Section B, 1. e. (3)	Sanitized Document: 3 CA02 MLA 3202 Work-Up - S...	[X]

Part I -- GENERAL INFORMATION -- Continued

Section B -- CHEMICAL IDENTITY INFORMATION -- Continued

3. Impurities
   (a) - Identify each impurity that may be reasonably anticipated to be present in the chemical substance as manufactured for commercial purpose. Provide the CAS Registry Number if available. If there are unidentified impurities, enter "unidentified."
   (b) - Estimate the maximum weight % of each impurity. If there are unidentified impurities, estimate their total weight %.

Impurity (a)	CAS Registry Number (a)	Maximum Percent % (b)	Confi-dential
2-Propanol, 1,1'-iminobis-	110-97-4	0.499	
Methanol, sodium salt (1:1)	124-41-4	2.0E-4	

Mark (X) this box if the data continues on the next page. ☐

Enter Attachment filename for Part I, Section B, 3. ☐

4. Synonyms - Enter any chemical synonyms for the new chemical identified in subsection 1 or 2.
Bis-(2-hydroxypropyl) Tallowamide, Ethoxylated Tallow Amide,

☐

Enter Attachment filename for Part I, Section B, 4. ☐

5. Trade identification - List trade names for the new chemical substance identified in subsection 1 or 2.
MLA-3202, Naugalube® OFM 3202,

☐

Enter Attachment filename for Part I, Section B, 5. ☐

6. Generic chemical name - If you claim chemical identify as confidential, you must provide a generic name for your substance that reveals the specific chemical identity of the new chemical substance to the maximum extent possible. Refer to the TSCA Chemical Substance Inventory, 1985 Edition, Appendix B for guidance on developing generic names.

Enter Attachment filename for Part I, Section B, 6.

7. Byproducts - Describe any byproducts resulting from the manufacture, processing, use, or disposal of the new chemical substance. Provide the CAS Registry Number if available.

Byproduct (1)	CAS Registry Number (2)	Confi-dential

Mark (X) this box if the data continues on the next page. ☐

Part I -- GENERAL INFORMATION – Continued

Section B -- CHEMICAL IDENTITY INFORMATION -- Continued

2. Polymers (For a definition of polymer, see the Instructions Manual.) | Confidential

a. Indicate the number-average weight of the lowest molecular weight composition of the polymer you intend to manufacture. Indicate maximum weight percent of low molecular weight species (not including residual monomers, reactants, or solvents) below 500 and below 1,000 absolute molecular weight of that composition. ☐

Describe the methods of measurement or the basis for your estimates:

GPC ☐ | **Other** (Specify Below) ☐

Specify Other:

(i) lowest number average molecular weight:	(ii) maximum weight % below 500 molecular weight:	(iii) maximum weight % below 1000 molecular weight:

Enter Attachment filename for Part I, Section B, 2. a. ☐

b. You must make separate confidentiality claims for monomer or other reactant identity, composition information, and residual information. Mark (X) the "Confidential" box next to any item you claim as confidential

(1) - Provide the specific chemical name and CAS Registry Number (if a number exists) of each monomer or other reactant used in the manufacture of the polymer.
(2) - Mark (X) this column if entry in column (1) is confidential.
(3) - Indicate the typical weight percent of each monomer or other reactant in the polymer.
(4) - Choose "yes" from drop down menu if you want a monomer or other reactant used at two weight percent or less to be listed as part of the polymer description on the TSCA Chemical Substance Inventory.
(5) - Mark (X) this column if entries in columns (3) and (4) are confidential.
(6) - Indicate the maximum weight percent of each monomer or other reactant that may be present as a residual in the polymer as manufactured for commercial purposes.
(7) - Mark (X) this column if entry in column (6) is confidential.

Monomer or other reactant specific chemical name (**1**)	CBI (**2**)	Typical composition (**3**)	Include in identity (**4**)	CBI (**5**)	Max residual (**6**)	CBI (**7**)
CAS Registry Number (**1**)						
CAS Registry Number (**1**)						
CAS Registry Number (**1**)						
CAS Registry Number (**1**)						
CAS Registry Number (**1**)						

Mark (X) this box if the data continues on the next page. ☐

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c. Please identify which method you used to develop or obtain the specified chemical identity information reported in this notice (check one).				CBI
Method 1 (CAS Inventory Expert Service - a copy of the identification report obtained from CAS Inventory Expert Service must be submitted as an attachment to this notice) ☐	IES Order Number		**Method 2** (other source) ☐	
Enter Attachment filename for Part I, Section B, 2. c.				☐

d. The currently correct Chemical Abstracts (CA) name for the polymer that is consistent with TSCA Inventory listings for similar polymers.	☐

CAS Registry Number (if a number already exists for the substance)		

e. Provide a correct representative or partial chemical structure diagram, as complete as can be known, if one can be reasonably ascertained.	☐

Enter Attachment filename for Part I, Section B, 2. e.		☐

Part I -- GENERAL INFORMATION -- Continued

Section C -- PRODUCTION, IMPORT, AND USE INFORMATION:

The information on this page refers to consolidated chemical number(s): [X] **1** [ ] **2** [ ] **3** [ ] **4** [ ] **5** [ ] **6**

Mark (X) the "Confidential" box next to any item you claim as confidential.

1. Production volume -- Estimate the **maximum** production volume during the first 12 months of production. Also estimate the maximum production volume for any consecutive 12-month period during the first three years of production. Estimates should be on 100% new chemical substance basis. For a Low Volume Exemption application, if you choose to have your notice reviewed at a lower production volume than 10,000 kg/yr, specify the volume and mark (x) in the binding box. If granted, you are bound to this volume.

Maximum first 12-month production (kg/yr) (100% new chemical substance basis)	Maximum 12-month production (kg/yr) (100% new chemical substance basis)	Confidential	Binding Option Mark (X)
XXX	XXX	[X]	[ ]

Enter Attachment filename for Part I, Section C, 1.		CBI [ ]

2. Use Information -- You must make separate confidentiality claims for the description of the category of use, the percent of production volume devoted to each category, the formulation of the new substance, and other use information. Mark (X) the "Confidential" Box next to any item you claim as confidential.

a. (1) --Describe each intended category of use of the new chemical substance by function and application.
(2) --Mark (X) this column if entry column (1) is confidential business information (CBI).
(3) --Indicate your willingness to have the information provided in column (1) binding.
(4) --Estimate the percent of total production for the first three years devoted to each category of use.
(5) --Mark (X) this column if entry in column (4) is confidential business information (CBI).
(6) --Estimate the percent of the new substance as formulated in mixtures, suspensions, emulsions, solutions, or gels as manufactured for commercial purposes at sites under your control associated with each category of use.
(7) --Mark (X) this column if entry in column (6) is confidential business information (CBI).
(8) --Indicate % of product volume expected for the listed "use" sectors. Mark more than one box if appropriate. Mark (X) to indicate your willingness to have the use type provided in (8) binding.
(9) --Mark (X) this column if entry(ies) in column (8) is (are) confidential business information (CBI).

Category of use (**1**) (by function and application i.e. a dispersive dye for finishing polyester fibers)	CBI (**2**)	Binding Option Mark (X) (**3**)	Production % (**4**)	CBI (**5**)	% in Formulation (**6**)	CBI (**7**)	% of substance expected per use (**8**)					CBI (**9**)
							Site-limited	Consumer*	Industrial	Commercial	Binding Option	
Friction Modifier for Motor Oil lubricants.			100.0		3.0		0.0	0.0	50.0	50.0		

* If you have identified a "consumer" use, please provide on a continuation sheet a detailed description of the use(s) of this chemical substance in consumer products. In addition include estimates of the concentration of the new chemical substance as expected in consumer products and describe the chemical reactions by which this substance loses its identity in the consumer product.

Mark (X) this box if the data continues on the next page. [ ]

b. Generic use description — If you claim any category of use description in subsection 2a as confidential, enter a generic description of that category. Read the Instruction Manual for examples of generic use descriptions.

Enter Attachment filename for Part I, Section C, 2. b.		CBI [ ]

3. Hazard Information -- Include in the notice a copy of reasonable facsimile of any hazard warning statement, label, material safety data sheet, or other information which will be provided to any person who is reasonably likely to be exposed to this substance regarding protective equipment or practices for the safe handing, transport, use, or disposal of the new substance. List in part III hazard information you include.

Mark (X) this box if you attach hazard information.	[X]	Binding Option Mark (X) [ ]

Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE

Section A -- INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER

Mark (X) the "Confidential" box next to any item you claim as confidential

The information on pages 8 and 8a refer to consolidated chemical number(s): ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

Complete section A for each type of manufacture, processing, or use operation involving the new chemical substance at industrial sites you control. Importers do not have to complete this section for operations outside the U.S.; however, you may still have reporting requirements if there are further industrial processing or use operations after import. You must describe these operations. See instructions manual

1. Operation description
   a. Identity -- Enter the identity of the site at which the operation will occur.

				Confi-dential
Name				
Site address (number and street)				☐
City		County		
State		ZIP code		

If the same operation will occur at more than one site, enter the number of sites. Identify the additional sites on a continuation sheet, and if any of the sites have significantly different production rates or operations, include all the information requested in this section for those sites as attachments. → ☐

Mark (X) this box if the data continues on the next page. ☐

b. Type -- Mark (X) Manufacturing ☐ Processing ☐ Use ☐ ☐

c. Amount and Duration -- Complete 1 or 2 as appropriate

				Confi-dential
1. Batch	Maximum kg/batch (100% new chemical substance)	Hours/batch	Batches/year	☐
2. Continuous	Maximum kg/day (100% new chemical substance)	Hours/day	Days/year	☐

d. Process description — Mark (X) to indicate your willingness to have your process description binding. → ☐

(1) Diagram the major unit operation steps and chemical conversions. Include interim storage and transport containers (specify- e.g. 5 gallon pails, 55 gallon drum, rail car, tank truck, etc.).
(2) Provide the identity, the approximate weight (by kg/day or kg/batch on a 100% new chemical substance basis), and entry point of all starting materials and feedstocks (including reactants, solvents, catalysts, etc.), and of all products, recycle streams, and wastes. Include cleaning chemicals (note frequency if not used daily or per batch.).
(3) Identify by number the points of release, including small or intermittent releases, to the environment of the new chemical substance. If releasing to two media at the same step, assign a second release number for the second medium.

☐

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Diagram of the major unit operation steps.	Confidential ☐

Enter Attachment filename for Part II, Section A, 1. d.	☐

Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE -- Continued

Section A -- INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER -- Continued

The information on pages 9 and 9a refer to consolidated chemical number(s): ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

2. Occupational Exposure -- You must make separate confidentiality claims for the description of worker activity, physical form of the new chemical substance, number of workers exposed, and duration of activity. Mark (X) the "Confidential" box next to any item you claim as confidential.

(1) -- Describe the activities (i.e. bag dumping, tote filling, unloading drums, sampling, cleaning, etc.) in which workers may be exposed to the substance.
(2) -- Mark (X) this column if entry in column (1) is confidential business information (CBI).
(3) -- Describe any protective equipment and engineering controls used to protect workers.
(4) and (6) -- Indicate your willingness to have the information provided in column (3) or (5) binding.
(5) -- Indicate the physical form(s) of the new chemical substance (e.g., solid: crystal, granule, powder, or dust) and % new chemical substance (if part of a mixture) at the time of exposure.
(7) -- Mark (X) this column if entries in columns (3) and (5) are confidential business information (CBI).
(8) -- Estimate the maximum number of workers involved in each activity for all sites combined.
(9) -- Mark (X) this column if entry in column (8) is confidential business information (CBI).
(10) and (11) -- Estimate the maximum duration of the activity for any worker in hours per day and days per year.
(12) -- Mark (X) this column if entries in columns (10) and (11) are confidential business information (CBI).

Worker activity (i.e., bag dumping, filling drums) (1)	CBI (2)	Protective Equipment/ Engineering Controls (3)	Binding Option Mark (X) (4)	Physical form(s) & % new substance (5)	Binding Option Mark (X) (6)	CBI (7)	# of Workers Exposed (8)	CBI (9)	Maximum Duration		CBI (12)
									Hrs/Day (10)	Days/Yr (11)	

Mark (X) this box if the data continues on the next page. ☐

Enter Attachment filename for Part II, Section A on the bottom of page 9a. ☐

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3. Environmental Release and Disposal -- You must make separate confidentiality claims for the release number and the amount of the new chemical substance released and other release and disposal information. Mark (X) the "Confidential" box next to each item you claim as confidential.

(1) -- Enter the number of each release point identified in the process description, part II, section A, subsection 1d(3).
(2) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology (in kg/day or kg/batch).
(3) -- Mark (X) this column if entries in columns (1) and (2) are confidential business information (CBI).
(4) -- Identify the media (stack air, fugitive air (optional-see Instruction Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify)) to which the new substance will be released from that release point.
(5) -- a. Describe control technology, if any, and control efficiency that will be used to limit the release of the new substance to the environment. For releases disposed of on land, characterize the disposal method and state whether it is approved for disposal of RCRA hazardous waste. On a continuation sheet, for each site describe any additional disposal methods that will be used and whether the waste is subject to secondary or tertiary on-site treatment. b. Estimate the amount released to the environment after control technology (in kg/day).
(6) -- Mark (X) this column if entries in columns (4) and (5) are confidential business information (CBI).
(7) -- Identify the destination(s) of releases to water. Please supply NPDES (National Pollutant Discharge Elimination System) numbers for direct discharges or NPDES numbers of the POTW (Publicly Owned Treatment Works). Mark (X) if the POTW name or NPDES # is confidential business information (CBI).

Release Number	Amount of New Substance Released		CBI	Medium of release e.g. Stack air	Control technology and efficiency (you may wish to optionally attach efficiency data)			CBI
(1)	(2a)	(2b)	(3)	(4)	(5a)	Binding Mark (X)	(5b)	(6)

Mark (X) this box if the data continues on the next page. ☐

(7) Mark (X) the destination(s) of releases to water.		NPDES#	CBI
☐ POTW--provide name(s)			☐
☐ Navigable waterway- - provide name(s)			☐
☐ Other--Specify			☐

Enter Attachment filename for Part II, Section A. ☐

Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE – Continued

Section B -- INDUSTRIAL SITES CONTROLLED BY OTHERS

The information on pages 10 and 10a refer to consolidated chemical number(s): [X] **1** [ ] **2** [ ] **3** [ ] **4** [ ] **5** [ ] **6**

Complete section B for typical processing or use operations involving the new chemical substance at sites you do not control. Importers do not have to complete this section for operations outside the U.S.; however, you must report any processing or use activities after import. See the Instructions Manual. *Complete a separate section B for each type of processing, or use operation involving the new chemical substance*. If the same operation is performed at more than one site describe the typical operation common to these sites. Identify additional sites on a continuation sheet.

1(a). Operation Description -- To claim information in this section as confidential, bracket (e.g. {}) the specific information that you claim as confidential.

(1) -- Diagram the major unit operation steps and chemical conversions, including interim storage and transport containers (specify - e.g. 5 gallon pails, 55 gallon drums, rail cars, tank trucks, etc). On the diagram, identify by letter and briefly describe each worker activity.

(2) -- Either in the diagram or in the text field 1(b) below, provide the identity, the approximate weight (by kg/day or kg/batch, on an 100% new chemical substance basis), and entry point of all feedstocks (including reactants, solvents and catalysts, etc) and all products, recycle streams, and wastes. Include cleaning chemicals (note frequency if not used daily or per batch).

(3) -- Either in the diagram or in the text field 1(b) below, identify by number the points of release, including small or intermittent releases, to the environment of the new chemical substance.

(4) -- Please enter the # of sites (remember to identify the locations of these sites on a continuation sheet):

	Number of Sites	2	Confidential [ ]

See Attachment (Sanitized Document: 37 Process Flow Diagram for ...
)

1(b). (Optional) This space is for a text description to clarify the diagram above. Confidential [X]

XXX

Enter Attachment filename for Part II, Section B on the bottom of page 10a.	Sanitized Document: 37 Process Flow Diagram for ... [X]

Continuation Sheet

ID	P10SB1(a)(4)1	Field	Part II, Section B, 1(a)(4). Operation Site Locations

SHELL OIL COMPANY
910 LOUISIANA ST
HOUSTON, TX 77002

PMN Page 10a

2. Worker Exposure/Environmental Release

(1) -- From the diagram above, provide the letter for each worker activity. Complete 2-8 for each worker activity described.
(2) -- Estimate the number of workers exposed for all sites combined.
(4) -- Estimate the typical duration of exposure per worker in (a) hours per day and (b) days per year.
(6) -- Describe physical form of exposure and % new chemical substance (if in mixture), and any protective equipment and engineering controls, if any, used to protect workers.
(7) -- Estimate the percent of the new substance as formulated when packaged or used as a final product.
(9) -- From the process diagram above, enter the number of each release point. Complete 9-13 for each release point identified.
(10) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology to the environment (in kg/day or kg/batch).
(12) -- Describe media of release i.e. stack air, fugitive air (optional-see Instructions Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify) and control technology, if any, that will be used to limit the release of the new substance to the environment.
(14) -- Identify byproducts which may result from the operation.
(3), (5), (8), (11), (13) and (15) -- Mark (X) this column if any of the proceeding entries are confidential business information (CBI).

Letter of Activity	# of Workers Exposed	CBI	Duration of Exposure		CBI	Protective Equip./Engineering Controls/Physical Form	% new substance	% in Formulation	CBI
(1)	(2)	(3)	(4a)	(4b)	(5)	(6)	(6)	(7)	(8)
A	2		8	180		See continuation page. id: <P10ASB2(6)C1R1>	100	3	

Release Number	Amount of New Substance Released		CBI	Media of Release & Control Technology	CBI
(9)	(10a)	(10b)	(11)	(12)	(13)
1	None Anticipated	None Anticipated		On-site Incineration Hood Vapor recovery to filtration and caustic scrubber possibly	

Mark (X) this box if the data continues on the next page. ☐

(14) Byproducts:

(15) CBI ☐

Enter Attachment filename for Part II, Section B.

Continuation Sheet

ID	P10ASB2(6)C1R1	Field	Part II, Section B, 2.(6) Protective Equip./Eng. Controls, etc., Row 1

Mostly in closed system. Any sporadic exposure would be to skin, but gloves are recommended., LIquid

Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE – Continued

Section B -- INDUSTRIAL SITES CONTROLLED BY OTHERS

The information on pages 10 and 10a refer to consolidated chemical number(s): [X] **1** [ ] **2** [ ] **3** [ ] **4** [ ] **5** [ ] **6**

Complete section B for typical processing or use operations involving the new chemical substance at sites you do not control. Importers do not have to complete this section for operations outside the U.S.; however, you must report any processing or use activities after import. See the Instructions Manual. *Complete a separate section B for each type of processing, or use operation involving the new chemical substance*. If the same operation is performed at more than one site describe the typical operation common to these sites. Identify additional sites on a continuation sheet.

1(a). Operation Description -- To claim information in this section as confidential, bracket (e.g. {}) the specific information that you claim as confidential.

(1) -- Diagram the major unit operation steps and chemical conversions, including interim storage and transport containers (specify - e.g. 5 gallon pails, 55 gallon drums, rail cars, tank trucks, etc). On the diagram, identify by letter and briefly describe each worker activity.

(2) -- Either in the diagram or in the text field 1(b) below, provide the identity, the approximate weight (by kg/day or kg/batch, on an 100% new chemical substance basis), and entry point of all feedstocks (including reactants, solvents and catalysts, etc) and all products, recycle streams, and wastes. Include cleaning chemicals (note frequency if not used daily or per batch).

(3) -- Either in the diagram or in the text field 1(b) below, identify by number the points of release, including small or intermittent releases, to the environment of the new chemical substance.

(4) -- Please enter the # of sites (remember to identify the locations of these sites on a continuation sheet):

	Number of Sites	2	Confidential [ ]

See Attachment (Sanitized Document: 38 Process Flow Diagram for ...
)

1(b). (Optional) This space is for a text description to clarify the diagram above. Confidential [X]

XXX

Enter Attachment filename for Part II, Section B on the bottom of page 10a.	Sanitized Document: 38 Process Flow Diagram for ... [X]

Continuation Sheet

ID	P10SB1(a)(4)2	Field	Part II, Section B, 1(a)(4). Operation Site Locations

VALVOLINE INTERNATIONAL
3499 BLAZER PKWY
LEXINGTON, KY 40509

PMN Page 10a

2. Worker Exposure/Environmental Release

(1) -- From the diagram above, provide the letter for each worker activity. Complete 2-8 for each worker activity described.
(2) -- Estimate the number of workers exposed for all sites combined.
(4) -- Estimate the typical duration of exposure per worker in (a) hours per day and (b) days per year.
(6) -- Describe physical form of exposure and % new chemical substance (if in mixture), and any protective equipment and engineering controls, if any, used to protect workers.
(7) -- Estimate the percent of the new substance as formulated when packaged or used as a final product.
(9) -- From the process diagram above, enter the number of each release point. Complete 9-13 for each release point identified.
(10) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology to the environment (in kg/day or kg/batch).
(12) -- Describe media of release i.e. stack air, fugitive air (optional-see Instructions Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify) and control technology, if any, that will be used to limit the release of the new substance to the environment.
(14) -- Identify byproducts which may result from the operation.
(3), (5), (8), (11), (13) and (15) -- Mark (X) this column if any of the proceeding entries are confidential business information (CBI).

Letter of Activity	# of Workers Exposed	CBI	Duration of Exposure		CBI	Protective Equip./Engineering Controls/Physical Form	% new substance	% in Formulation	CBI
(1)	(2)	(3)	(4a)	(4b)	(5)	(6)	(6)	(7)	(8)
B	2		8	180		See continuation page. id: <P10ASB2(6)C2R1>	100	3	

Release Number	Amount of New Substance Released		CBI	Media of Release & Control Technology	CBI
(9)	(10a)	(10b)	(11)	(12)	(13)
2	None Anticipated	None Anticipated		On-site Incineration Hood Vapor recovery to filtration and caustic scrubber possibly	

Mark (X) this box if the data continues on the next page. ☐

(14) Byproducts:

(15) CBI ☐

Enter Attachment filename for Part II, Section B. ☐

Continuation Sheet

ID	P10ASB2(6)C2R1	Field	Part II, Section B, 2.(6) Protective Equip./Eng. Controls, etc., Row 1

Mostly in closed system. Any sporadic exposure would be to skin, but gloves are recommended., Liquid

OPTIONAL POLLUTION PREVENTION INFORMATION

To claim information in the following section as confidential, bracket (e.g. {}) the specific information that you claim as confidential.

In this section you may provide information not reported elsewhere in this form regarding your efforts to reduce or minimize potential risks associated with activities surrounding manufacturing, processing, use and disposal of the PMN substance. Please include new information pertinent to pollution prevention, including source reduction, recycling activities and safer processes or products available due to the new chemical substance. Source reduction includes the reduction in the amount or toxicity of chemical wastes by technological modification, process and procedure modification, product reformulation, and/or raw materials substitution. Recycling refers to the reclamation of useful chemical components from wastes that would otherwise be treated or released as air emissions or water discharges, or land disposal. Quantitative or qualitative descriptions of pollution prevention, source reduction and recycling should emphasize potential risk reduction in addition to compliance with existing regulatory requirements. The EPA is interested in the information to assess overall net reductions in toxicity or environmental releases and exposures, not the shifting of risks to other media (e.g., air to water) or nonenvironmental areas (e.g., occupational or consumer exposure). To the extent known, information about the technology being replaced will assist EPA in its relative risk determination. In addition, information on the relative cost or performance characteristics of the PMN substance to potential alternatives may be provided.

Describe the expected net benefits, such as

(1) an overall reduction in risk to human health or the environment;
(2) a reduction in the generation of waste materials through recycling, source reduction or other means;
(3) a reduction in the use of hazardous starting materials, reagents, or feedstocks;
(4) a reduction in potential toxicity, human exposure and/or environmental release; or
(5) the extent to which the new chemical substance may be a substitute for an existing substance that poses a greater overall risk to human health or the environment.

Information provided in this section will be taken into consideration during the review of this substance. See PMN Instructions Manual and Pollution Prevention Guidance manual for guidance and examples.

The customer will transfer additive fluid from a drum at room temperature by using a pump or applied vacuum to a suitable wand inserted into the drum to pull out the additive as required (figure attached). By using this method as the drum is near empty it can be tilted to remove much more of the additive leaving virtually no heel at the bottom and only material that has wetted the sides of the drum.
The empty drums must be handled appropriately in-line with legal requirements. Options include washing with a suitable minimum amount of the standard drum cleaning solvent system and the rinse disposed of as hazardous material by incineration, kept by the customer for their own additional uses possibly to contain the finished product fully blended motor oil, shredding and disposal in a secure hazardous waste landfill, or once clean the drums are crushed and disposed of by sending to a recycled facility as metal waste.
For bulk liquid containers (i.e. tank trailers) a pump or nitrogen pressure is used to empty the bulk liquid containers. The containers are then cleaned at an approved wash terminal and the wash liquid disposed of as a hazardous waste.
A Diagram of potential setup- for process of additizing our MLA-3202 friction modifier to blending tank formulating a final customer passenger car motor oil is represented in the attached document.
It is expected that nearly all of the notified substance will be blended into passenger vehicle motor oils in contained industrial facilities.
Occupational exposure may occur during blending activities; however, this exposure is expected to be minimized using engineering controls and personal protective equipment.
Occupational exposure to the motor oils containing the notified substance is expected to include workers who manufacture passenger vehicles (i.e. OEMs), and those who change motor oils in commercial automotive repair facilities (i.e. Mr. Lube, Canadian Tire, etc.). Exposure in occupational settings is expected to be minimized using personal protective equipment and engineering controls.
Finished motor oils are expected to be available to the consumer through retail establishments; however, these products are not intended to be used on a frequent basis. It is estimated that the frequency of do-it-yourself (DIY) oil changes would be 2-3 times per year, and these DIY activities would not be conducted by significant portion of the population. Public exposure to the notified substance is expected to be negligible.
Consumers will not be expected to handle the neat product.
Disposal of the final formulated lubricant must be carried out according to best practice for motor oil, for example:
'Many municipal recycling centers have used-oil disposal stations. Utilize a designated oil-disposal facility to avoid incorrect -- and in most cases illegal -- disposal methods. Never dispose of used motor oil in the trash, down household drains, into storm drains or directly onto soil. Inspecting equipment and vehicles regularly and immediately repairing items that appear to be leaking oil is another way to prevent pollution from used motor oil.'
http://www.fwpcoa.org/content.aspx?page_id=2507&club_id=859275&item_id=1105&pst=3324
Products containing the notified substance are expected to be blended in contained industrial facilities. Any waste material, including that from an accidental spill, is expected to be collected for recycling or disposal by an approved waste management company.
The notified substance may be used in commercial applications in facilities that are expected to be fully contained. Any waste material, including that from an accidental spill, is expected to be collected for recycling or disposal by an approved waste management company.
Consumers are encouraged to dispose of spent oils and lubricants through local municipal hazardous waste programs; however, it is possible that products containing the notified substance (including residue in containers) may be released to land via disposal in regular household waste or in the event of an accidental spill. Consumers will not be expected to handle the neat product.
Additionally, the notified substance is inherently biodegradable.
Significant release to the environment is not expected when recommended practices are followed.

Enter Attachment filename for Pollution Prevention Page 11.	Sanitized Document: 6 Process Flow Diagram for ...	X

Part III -- LIST OF ATTACHMENTS

Attach continuation sheets for sections of the form, test data and other data (including physical/chemical properties and structure/activity information), and optional information after this page. Clearly identify the attachment and the section of the form to which it relates, if appropriate. Number consecutively the pages of any paper attachments. In the Number of Pages column below, enter the inclusive page numbers of each attachment for paper submissions or enter the total number of pages for each attachment for electronic submissions. Electronic attachments can be identified by filename.
Mark (X) the "Confidential" box next to any attachment name or filename you claim as confidential. Read the Instructions Manual for guidance on how to claim any information in an attachment as confidential. You must include with the sanitized copy of the notice form a sanitized version of any attachment in which you claim information as confidential.

#	Attachment Name	Attachment Filename	Number of Pages	Associated PMN Section Number	CBI
1	US GHS Safety Data Sheet for MLA-3202	MLA-3202 US GHS SDS 10 Jul 2017.pdf	12	Hazard Information Section (Amides, tallow, N,N-bis(2-hydroxypropyl))	
2	GHS Label for MLA-3202	MLA-3202 US Label 10 Jul 2017.pdf	1	Hazard Information Section (Amides, tallow, N,N-bis(2-hydroxypropyl))	
3	Structure Summary for UVCB Substance	MLA-3202 REACh Structure.pdf	1	Class 1 or 2 Substances Chemical Structure Diagram (Amides, tallow,	
4	IES Report	MLA-3202 CAS Number.pdf	2	Class 1 or 2 Substances ID Method (Amides, tallow, N,N-bis(2-	
5	Analytical Work-up for CAS 1454803-04-3	CA02 MLA 3202 Work-Up - Sanitized.xlsx	4	B.1.e.3. Range of Composition (Amides, tallow, N,N-bis(2-	
6	Process Flow Diagram	Process Flow Diagram for additising a lubricant using MLA-	1	Industrial Sites Controlled By Others (Shell Oil Company)	
7	Process Flow Diagram	Process Flow Diagram for additising a lubricant using MLA-	1	Industrial Sites Controlled By Others (Valvoline International)	
8	MLA-3202 Mass Spectrometry Report	Mass Spectrometry Analysis - SANITIZED.pdf	38	Additional Attachments	
9	MLA-3202 UV-Vis Spectroscopy Report	UV-Vis Analysis - SANITIZED.pdf	5	Additional Attachments	
10	MLA-3202 C13-MNR Report	13C NMR Analysis - SANITIZED.pdf	5	Additional Attachments	
11	MLA-3202 FTIR Report	FTIR Analysis - SANITIZED.pdf	6	Additional Attachments	
12	MLA-3202 H NMR Report	H NMR Analysis -	5	Additional Attachments	
13	Phys-Chem Testing Report for MLA-3202	207258_511869_Chemtura_PhysChem -.pdf	43	Additional Attachments	
14	MLA-3202 Phys-Chem property report: Analytical method, Water Solubility and Partition Coefficient	MLA-3202 Analytical Method Water Solubility Partition	32	Additional Attachments	
15	Adsorption/Desorption and Hydrolysis report.	207258_	38	Additional Attachments	
16	Repeated Dose 28-Day Oral Toxicity Study with MLA-3202 by Daily Gavage in the Rat (OECD	MLA-3202 28 Day Oral Rat CR 207258_514867.pdf	176	Additional Attachments	
17	Assessment of Acute Dermal Toxicity with MLA-3202 in the Rat (OECD 402)	MLA-3202 Acute Dermal Rat CR 207258_ 511877.pdf	18	Additional Attachments	
18	Acute Eye Irritation/Corrosion Study with MLA-3202 in the Rabbit (OECD 405)	MLA-3202 Acute Eye Irritation Rabbit OECD 405 CR	16	Additional Attachments	
19	Evaluation of the Eye Hazard Potential of MLA-	MLA-3202 BCOP Assay OECD	19	Additional Attachments	
20	Assessment of Acute Oral Toxicity with MLA-3202 in the Rat (Acute Toxic Class Method) OECD 423	MLA-3202 Acute Oral Toxicity CR 207258.pdf	19	Additional Attachments	
21	Evaluation of the Mutagenic Activity of MLA-3202	MLA-3202 Ames Assay OECD	35	Additional Attachments	

Mark (X) this box if the data continues on the next page. [X]

Part III -- LIST OF ATTACHMENTS

Attach continuation sheets for sections of the form, test data and other data (including physical/chemical properties and structure/activity information), and optional information after this page. Clearly identify the attachment and the section of the form to which it relates, if appropriate. Number consecutively the pages of any paper attachments. In the Number of Pages column below, enter the inclusive page numbers of each attachment for paper submissions or enter the total number of pages for each attachment for electronic submissions. Electronic attachments can be identified by filename.
Mark (X) the "Confidential" box next to any attachment name or filename you claim as confidential. Read the Instructions Manual for guidance on how to claim any information in an attachment as confidential. You must include with the sanitized copy of the notice form a sanitized version of any attachment in which you claim information as confidential.

#	Attachment Name	Attachment Filename	Number of Pages	Associated PMN Section Number	CBI
22	Evaluation of the Ability of MLA-3202 to Induce Chromosome Aberrations in Cultured Peripheral	MLA-3202 Chromosome Aberration in vitro OECD 473 CR	29	Additional Attachments	
23	Mouse Lymphoma Gene Mutation test (OECD 490)	MLA-3202 In Vitro Mouse Lymphoma Gene Mutation Test	62	Additional Attachments	
24	Reproduction/Developmental Toxicity Screening Test of MLA-3202 in Rats by Oral Gavage (OECD	MLA-3202 Repro Screening Rat OECD 421 CR	197	Additional Attachments	
25	In Vitro Skin Corrosion Test with MLA-3202 Using a Human Skin Model (OECD 431)	MLA-3202 In Vitro Skin Corrosion OECD 431 WIL	16	Additional Attachments	
26	In Vitro Skin Irritation Test with MLA-3202 Using a Human Skin Model (OECD 439)	MLA-3202 In Vitro Skin Irritation OECD 439 WIL 207258.pdf	20	Additional Attachments	
27	Primary Skin Irritation/Corrosion Study with MLA03292 In the Rabbit (4-Hour Semi-Occlusive	MLA-3202 Skin Irritation Rabbit CR 511873.pdf	18	Additional Attachments	
28	Assessment of Skin Sensitization to MLA-3202 in the Mouse (Local Lymph Node Assay) - False	MLA-3202 LLNA CR 207258 511875.pdf	23	Additional Attachments	
29	Skin Sensitization in Guinea Pigs (OECD 406)	MLA-3202 Buehler Skin Sensitization Stillmeadow 20252-	19	Additional Attachments	
30	Acute Toxicity Study in Daphnia Magna with MLA-3202 (Static)	MLA-3202 Daphnia acute OECD 202 EAG 207258_ 511881.pdf	34	Additional Attachments	
31	Report for Acute Toxicity test to Earthworm of MLA-3202 (OECD 207)	MLA-3202 Acute Toxicity to Earthworm Nanjing	18	Additional Attachments	
32	Report for Acute Toxicity of MLA-3202 to Fish (Gobiocypris rarus) OECD 203	MLA-3202 Acute Toxicity to Fish Nanjing 2016NC020-203-EN-	28	Additional Attachments	
33	96-Hour Acute Toxicity Study in Carp with MLA-	MLA-3202 Fish acute OECD 203	33	Additional Attachments	
34	Fresh Water Algal Growth Inhibition Test with MLA-3202 (OECD 201)	MLA-3202 Algae OECD 201 EAG 207258_ 511882.pdf	42	Additional Attachments	
35	Report for Inherent Biodegradation Test of MLA-3202 (OECD 302C)	MLA-3202 Inherent Biodegradation Nanjing-	24	Additional Attachments	
36	Determination of 'Ready' Biodegradability: Carbon	207258_511884_Chemtura_Biod	20	Additional Attachments	
37	Activated Sludge Respiration Inhibition Test (Carbon and Ammonium Oxidation) with MLA-	207258_511885_Chemtura_ Inhib. of resp. OECD 209.pdf	24	Additional Attachments	
38	Process Flow Diagram	Process Flow Diagram for additising a lubricant using MLA-	1	Optional Pollution Prevention	

Mark (X) this box if the data continues on the next page. ☐

PMN Page 13

PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

The information on this page refers to chemical number(s): [X] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6

To assist EPA's review of physical and chemical properties data, please complete the following worksheet for data you provide and include it in the notice. Identify the property measured, the value of the property, the units in which the property is measured (as necessary), and whether or not the property is claimed as confidential. Give the attachment number (found on page 12) in column (b). The physical state of the neat substance should be provided. These measured properties should be for the neat (100% pure) chemical substance. Properties that are measured for mixtures or formulations should be so noted (% PMN substance in __). You are not required to submit this worksheet; however, EPA strongly recommends that you do so, as it will simplify the review and ensure that confidential information is properly protected. You should submit this worksheet as a supplement to your submission of test data. This worksheet is not a substitute for submission of test data.

Property (a)		Unit	Mark X if Provided	Attachment Number (b)	Value (c)			Measured or Estimate (M or E)	CBI Mark (X) (d)
Physical state of neat substance			[X]		(solid) [ ]	(liquid) [X]	(gas) [ ]	Measured	
Vapor Pressure @ Temperature	20	°C	[X]		1.6 x 10-8		Torr	Measured	
Density/relative density			[X]		0.941		g/cm3	Measured	
Solubility			[ ]				g/L		
@ Temperature		°C							
Solvent									
Solubility in Water @ Temperature	20	°C	[X]		0.00054		g/L	Measured	
Melting Temperature			[X]		-50 to +10		°C	Measured	
Boiling / Sublimation temperature @		Torr	[ ]				°C		
Spectra			[ ]						
Dissociation constant			[X]		No pKa in the pH range 1-13			Measured	
Octanol / water partition coefficient			[X]		Log Pow >5.3			Measured	
Henry's Law constant			[ ]						
Volatilization from water			[ ]						
Volatilization from soil			[ ]						
pH@ concentration	1%		[X]		4.7			Measured	
Flammability			[X]		Not highly flammable			Estimate	
Explodability			[X]		Not Explosive			Measured	
Adsorption / Coefficient			[X]		Multiple peaks logKoc = 5.4 - >6.3			Measured	
Particle Size Distribution			[ ]						
Other – Specify	Vapor Pressure @ 25°C		[X]		3.5 x 10-8 Torr			Measured	

Continuation Sheet

ID		Field	

PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

Property (a)		Mark X if Provided	Attachment Number (b)	Value (c)	Measured or Estimate (M or E)	CBI Mark (X) (d)
Other – Specify	Surface Tension at 20°C	☐		57.2 mN/m Surface Active	Measured	
Other – Specify	Flash Point	☐		No Flash Point	Measured	
Other – Specify	Auto-Ignition Temperature	☐		360 °C	Measured	
Other – Specify	Oxidizing Properties	☐		Not Oxidizing	Measured	
Other – Specify	Boiling Temperature	☐		None. Reaction and/or decomposition at >200°C	Measured	
Other – Specify	Appearance	☐		Amber liquid	Measured	
Other – Specify	pH of pure test substance	☐		6.5	Measured	
Other – Specify	Viscosity @ 20°C	☐		1116 mm2/s	Measured	
Other – Specify	Viscosity @ 40°C	☐		245 mm2/s	Measured	
Other – Specify	Hydrolysis at pH 4, 7 & 9	☐		Hydrolytically Stable	Measured	
Other – Specify		☐				
Other – Specify		☐				
Other – Specify		☐				
Other – Specify		☐				
Other – Specify		☐				
Other – Specify		☐				